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Date: <u>10/23/02</u>	Signature: <u>Kathryn Bryan</u> Kathryn Bryan

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

KEFENG LIU, ET AL.

Filed: December 21, 2000

Serial No.: 09/746963

For: Matching Network Hybrid Electro-Magnetic Compatibility Absorber

Confirmation No.: 1155

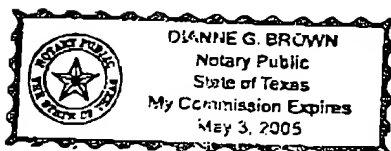
Art Unit: 3662

Examiner: Ian J. Lobo

Docket No.: 043377.0011

AFFIDAVIT UNDER 37 C.F.R. 1.132

I, James Psencik, declare that I am of ordinary skill in the art of hybrid electromagnetic compatibility (EMC) absorbers. Upon review of the above noted patent application and without undue experimentation, I have come to understand potential materials that could be used to create the coating of absorber-like material described in the application at page 10, lines 13-16. I believe that, with similar review of the above-noted application, another person of ordinary skill in the art should understand that the coating used to control electrical properties of the matching network hybrid EMC absorber is an electrically conductive material or resistive/metalized film such as carbon, latex, graphite, carbon fiber, mylar, etc.

Date: October 21, 2002Subscribed and sworn to before me, on this 21st day of October, 2002.

Dianne G. Brown
Notary Public - State of Texas
DIANNE G. BROWN
[Type/Print Name of Notary]

ATTACHMENT A
(Pending Claims)

1. A matching network hybrid electro-magnetic compatibility absorber to
5 provide improved radio frequency absorbing performance in a frequency range of
approximately 20 MHz to approximately 500 MHz, comprising:
- a big element;
 - a small element that is located beneath the big element;
 - the big element comprises a big element surface;
 - 10 the small element comprises a small element surface;
 - a big element coating that covers a predetermined portion of the big element
surface; and
 - a small element coating that covers a predetermined portion of the small element
surface.
- 15 2. The matching network hybrid electro-magnetic compatibility absorber of
claim 1, wherein the matching network hybrid electro-magnetic compatibility absorber
comprises a substantially pyramid-like shape;
- the predetermined portion of the big element surface comprises less than an
entirety of the big element surface; and
 - 20 the predetermined portion of the small element surface comprises less than an
entirety of the small element surface.
3. The matching network hybrid electro-magnetic compatibility absorber of
claim 1, wherein at least one of the big element coating and the small element coating
comprises a substantially tear drop shape.
- 25 4. The matching network hybrid electro-magnetic compatibility absorber of
claim 1, wherein at least one of the big element coating and the small element coating
comprises a predetermined thickness.

5. The matching network hybrid electro-magnetic compatibility absorber of claim 1, wherein the big element and the small element are separated by a predetermined distance.

6. The matching network hybrid electro-magnetic compatibility absorber of claim 1, wherein the big element comprises at least two surfaces; and a distance between the at least two surfaces comprises a predetermined thickness.

7. The matching network hybrid electro-magnetic compatibility absorber of claim 1, wherein the big element coating comprises a first material; and the small element coating comprises a second material.

8. The matching network hybrid electro-magnetic compatibility absorber of claim 1, further comprising at least one additional big element coating that covers at least one additional predetermined portion of the big element surface, the at least one additional predetermined portion of the big element surface being less than an entirety of the big element surface.

9. A matching network hybrid electro-magnetic compatibility absorber to provide improved radio frequency absorbing performance in a frequency range of approximately 20 MHz to approximately 500 MHz, comprising:

a layer comprising a surface; and

a coating that covers a predetermined portion of the surface.

10. The matching network hybrid electro-magnetic compatibility absorber of claim 9, wherein the coating comprises a predetermined shape.

11. The matching network hybrid electro-magnetic compatibility absorber of claim 9, wherein the layer comprises at least one additional surface; and

at least one additional coating covers a predetermined portion of the at least one additional surface, the predetermined portion of the at least one additional surface

comprises less than an entirety of the least one additional surface.

12. The matching network hybrid electro-magnetic compatibility absorber of claim 9, further comprising at least one additional layer, the at least one additional layer comprises at least one additional surface; and

5 at least one additional coating covers a predetermined portion of the at least one additional surface, the predetermined portion of the at least one additional surface comprises less than an entirety of the least one additional surface.

13. The matching network hybrid electro-magnetic compatibility absorber of claim 9, further comprising at least two elements; and

10 at least one of the two elements comprises the layer.

14. The matching network hybrid electro-magnetic compatibility absorber of claim 9, wherein the layer comprises at least one additional surface; and

a distance between the surface and the at least one additional surface comprises a predetermined thickness.

15 15. The matching network hybrid electro-magnetic compatibility absorber of claim 9, wherein the coating comprises a predetermined thickness; and

the predetermined portion of the surface comprises less than an entirety of the surface.

16. A matching network hybrid electro-magnetic compatibility absorber,
20 comprising:

an absorber comprising a surface having a coating;

the coating comprising at least one of a coating type, a coating shape, a coating thickness, and a coating placement; and

25 at least one of the coating type, the coating shape, the coating thickness, and the coating placement is varied as a design parameter to permit absorption of radio frequency

energy in a frequency range extending from approximately 500 MHz to approximately 40 GHz.

17. The matching network hybrid electro-magnetic compatibility absorber of claim 16, wherein the coating shape comprises a substantially tear drop shape.

5 18. The matching network hybrid electro-magnetic compatibility absorber of claim 16, wherein the coating covers an entirety of the surface.

19. The matching network hybrid electro-magnetic compatibility absorber of claim 16, wherein the coating covers less than an entirety of the surface.

10 20. The matching network hybrid electro-magnetic compatibility absorber of claim 16, wherein the surface comprises at least one additional coating that comprises at least one of at least one additional coating type, at least one additional coating shape, at least one additional coating thickness, and at least one additional coating placement.